Date=08/07/2020
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Subject ⇒ **Python Loops**

IN PREVIOUS LECTURE **(QUICK RECAP) Date-07/07/2020**	**In today's Lecture (Overview)**
Why do we learn programming on **python??** **Introduction To Vscdode** **input** **Conditional operator** **if/else** **indentation** **typecasting**	⇒What does the **if __name__ == "__main__":** do? ⇒ What is **Python** Loops? ⇒ **For Loop** ⇒ **While Loop** ⇒ **Continue Command** ⇒ **Break Command** ⇒ **While true loop**

⇒ What does the **if __name__ == "__main__"**: do?

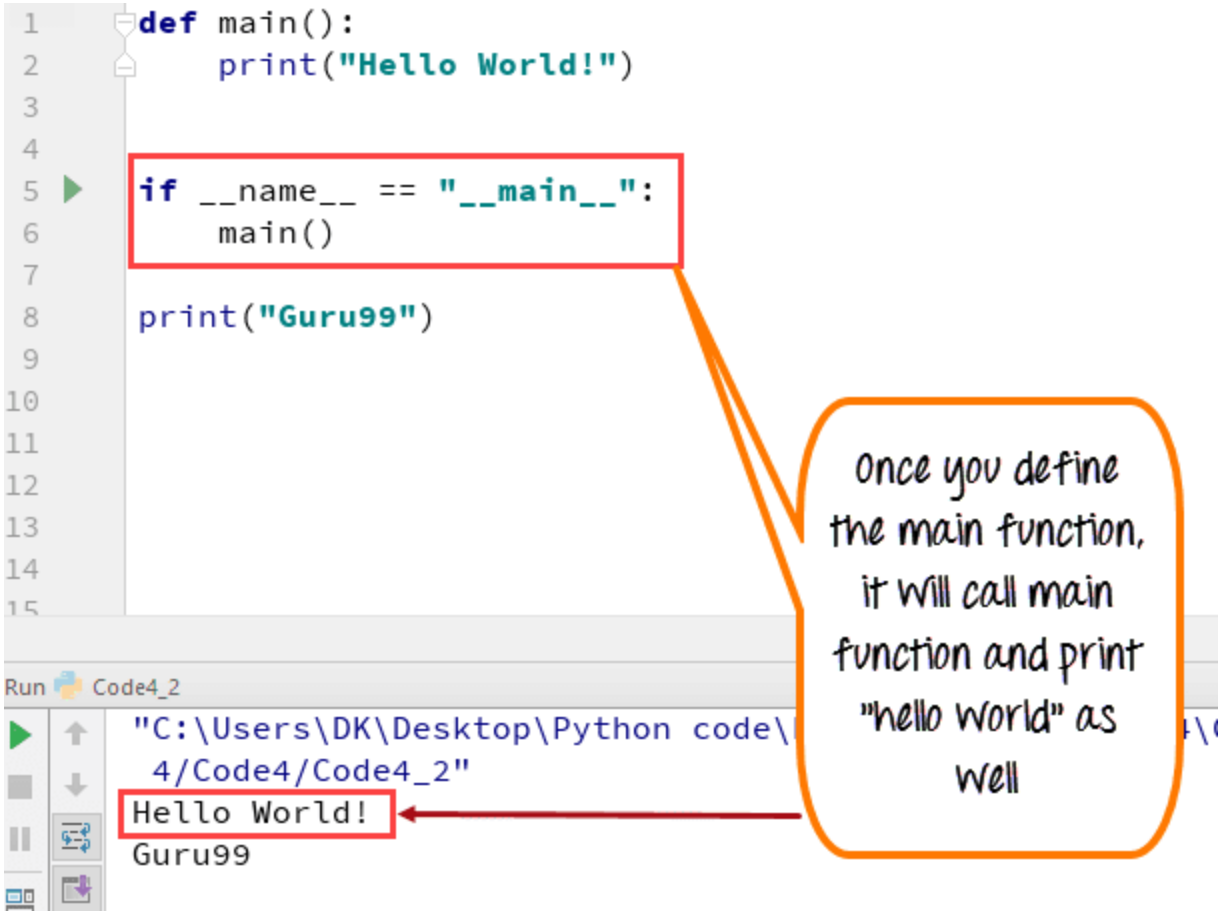
Before executing code, Python interpreter **reads source** file and define few special **variables/global variables.**

-If the python interpreter is running that module (the source file) as the main program, it sets the special __name__ variable to have a value **"__main__"**. If this file is being imported from another module, __name__ will be set to the **module's name.** Module's name is available as value to __name__ global variable.

-Whenever the Python interpreter reads a source file, **it does two things:**

- it sets a few special variables like **__name__**, and then

- it **executes** all of the code found in the file.



⇒ What **is Python** loops??

- **Python** For **Loops**. **A for loop is used for iterating over a sequence** (that is either a list, a tuple, a dictionary, a set, or a string).

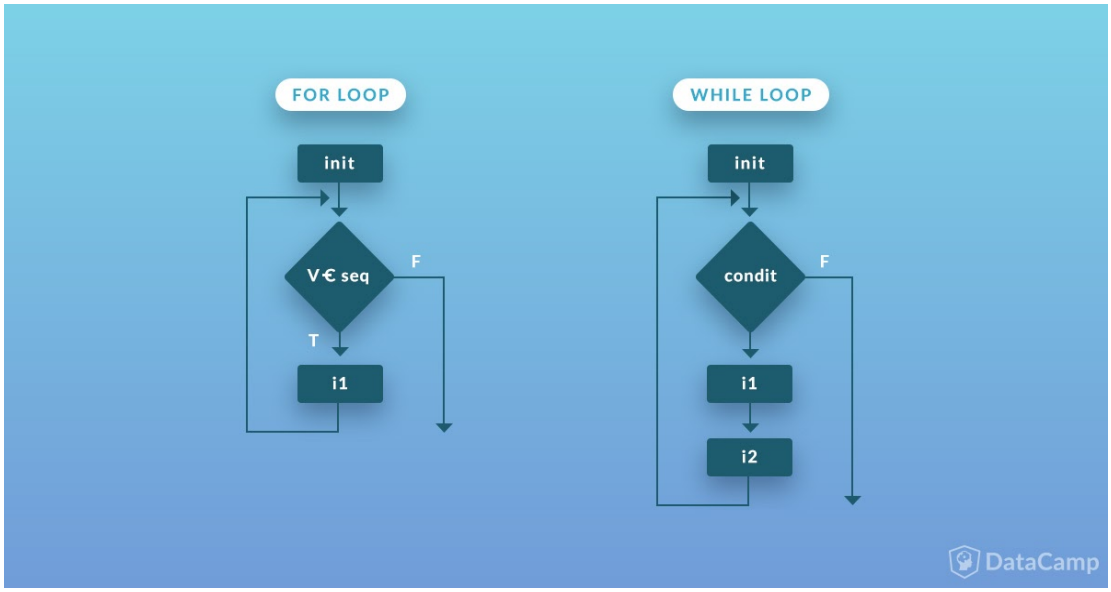
- This is less like the for keyword in other programming languages

- It works more like **an iterator method** as found in other object-orientated programming languages.

Example

Print each fruit in a fruit list:

```
fruits = ["apple", "banana", "cherry"]
for x in fruits:
  print(x)
```



⇒ For Loop

Like other programming languages, for loops in Python are a little different in the sense that **they work more like an iterator and less like a for keyword**. In Python, there is not C like syntax for(i=0; i<n; i++) but you use for in n.

```
for i in range(10):
    print (i+1)
```

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⇒ While loop

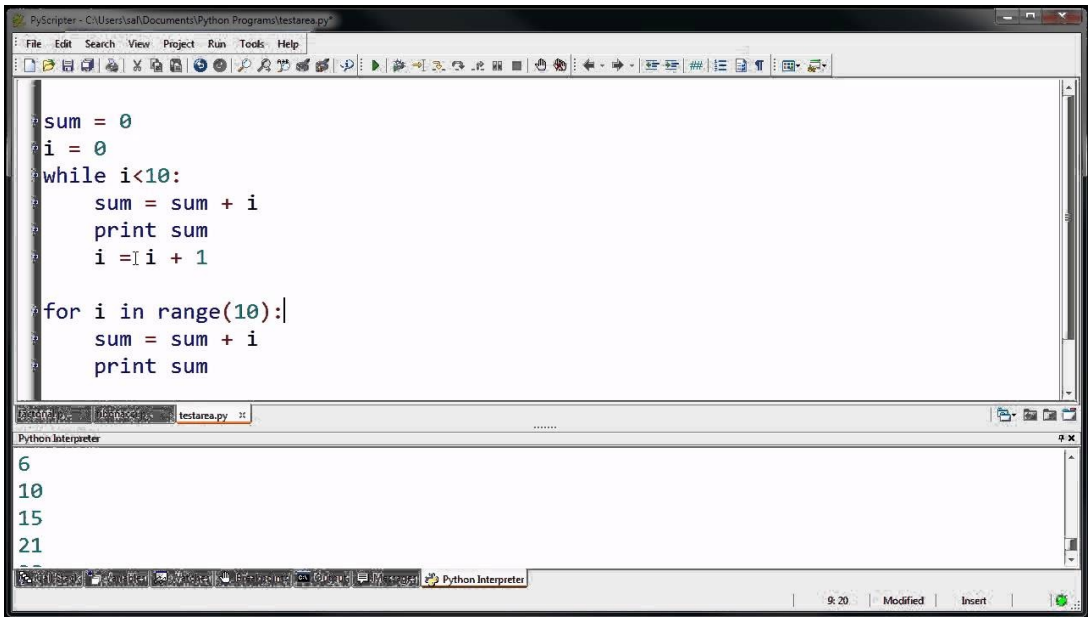
-The syntax of a while loop in Python programming language is − **while expression: statement(s) Here,**

-With the `while` loop we can execute a set of statements as long as a condition is true.

Example

Print i as long as i is less than 6:

```
i = 1
while i < 6:
  print(i)
  i += 1
```



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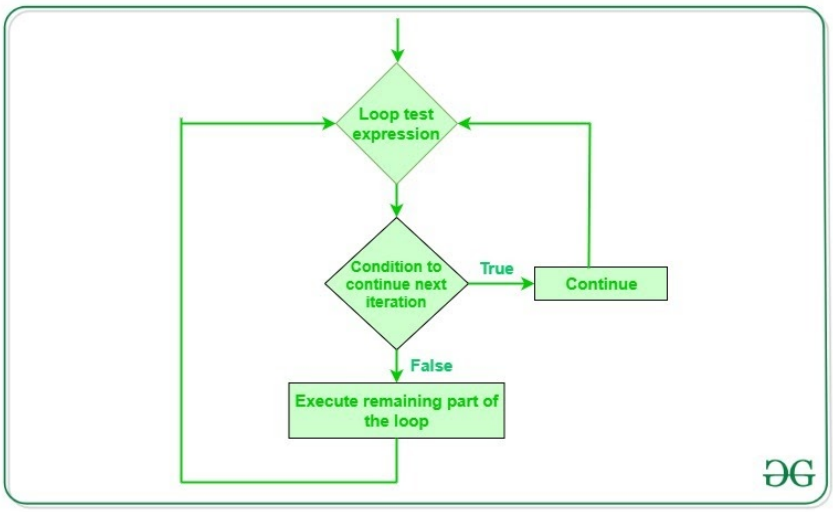
⇒ Continue Command

-The **continue statement in Python** returns the control to the beginning of the while loop.

- The **continue statement** rejects all the remaining statements in the current iteration of the loop and moves the control back to the top of the loop.

-The **continue statement** can be used in both while and for loops.



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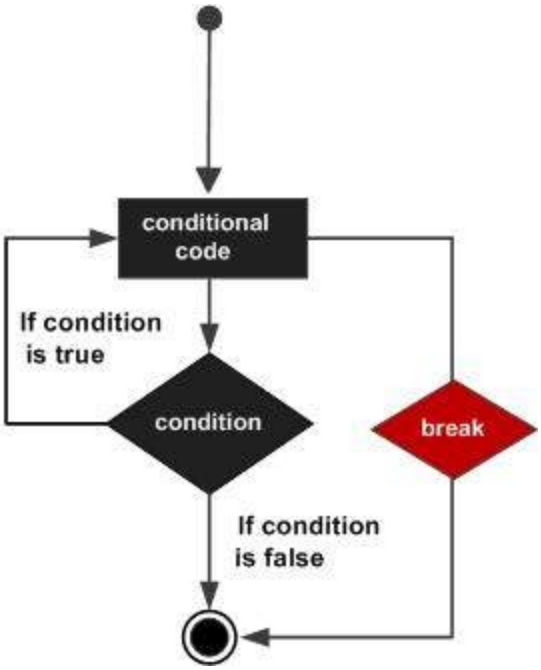
⇒ Break command

-Python break statement. **It terminates the current loop and resumes execution at the next statement,**

-The most common use for **break** is when some **external condition is triggered requiring a hasty exit from a loop.**

-The **break statement** can be used in **both while and for loops.**



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⇒ **While true loop**

- **while True** means **loop forever.**

-**The while statement takes an expression** and executes the loop body **while** the expression evaluates to (boolean) **"true".**

- Note= when you use **"while true"** you have to compulsory add **break command** after the statement ends, otherwise it will continue to print 1st statement forever.

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